Met.O.871

the meteorological magazine

1974 Volume 103

INDEX

	Pages		Pages
January	1–28	July	181–208
February	29–60	August	209–240
March	61–92	September	241–272
April	93–120	October	273–304
May	121–148	November	305–340
June	149–180	December	341–372

Adams, R. J.; A meteorological/entomological study, 53, *photograph facing* 44
Annual report on the Meteorological Office 1973; *official publication*, 271
Armstrong, J. J.; Temperature differences between two ground-level sites and a roof site in Southampton, 360
Assessment of the usefulness of some snow predictors; C. A. S. Lowndes, A. Beynon and C. L. Hawson, 341
Assessment of topographical controls in the distribution of rainfall in the central Pennines; K. C. Goh and J. G. Lockwood, 275
Automated weather radar display, 340
Automatic chart plotting, 208

Belton, A. R.; *obituary*, 120
Benwell, G. R. R.; Understanding our atmospheric environment (M. Neiburger, J. G. Edinger and W. D. Bonner), *review*, 23
Beynon, A., Lowndes, C. A. S. and Hawson, C. L.; An assessment of the usefulness of some snow predictors, 341
Boyden, C. J.; Wet-bulb freezing level as a snow predictor, *letter*, 207
British Rainfall 1966; *official publication*, 91
British Rainfall Supplement 1961–1965; *official publication*, 208
Burt, W. V., Cummings, T. and Paulson, C. A.; Large changes in wind patterns at sea, 21

Carroll, G. E. and Hinz, R. K.; Note on errors that may be induced by using visibility observations taken at greater than hourly intervals, 105, *correction*, 304
Carson, D. J. and Smith, F. B.; A scheme for deriving day-time boundary-layer wind profiles, 241
Cattle, H. and Weston, K. J.; The determination of large-scale vertical motion by a modified isentropic technique, 82
Central England temperature quintiles and associated pressure anomalies on a monthly time-scale; R. Murray and J. D. Lankester, 3
Climate and food production, 337
Climatology of the stratosphere over north-west Europe; *official publication*, 91
Comparisons of rainfall at Kew, 339
Contribution of satellites to the exploration of the global atmosphere and to the improvement of weather forecasting; B. J. Mason, 181, *photographs between* 194, 195

Craddock, J. M.; Climatologie—Méthodes et Pratiques, 2e édition (R. Arléry, H. Grisollet and B. Guilmet), *review*, 206
Craddock, J. M.; Report and commentary on a symposium on the assessment and verification of statistical and other software, 305
Crawford, S. G.; The effect of thermometer screen design on the observed temperature (W. R. Sparks), *review*, 26
Cummings, T., Burt, W. V. and Paulson, C. A.; Large changes in wind patterns at sea, 21

Day, G. J., Sands, K. J. T. and Tonkinson, B.; The Meteorological Office Weather Observing System (MOWOS) Mk 2, 329
Determination of large-scale vertical motion by a modified isentropic technique; H. Cattle and K. J. Weston, 82
Dikaiakos, J. G.; A note on an index of trapping efficiency of smoke particles in the layer surface to 1000 millibars over Athens at night, 300
Distribution and frequency of high cumulonimbus tops near Singapore as measured by 10-centimetre radar; F. F. Hill and R. P. W. Lewis (Part I), 29, (Part II), 61
Dixon, R.; Theory and application of numerical analyses (G. M. Phillips and P. J. Taylor), *review*, 236
Doherty, G.; *obituary*, 340

Else, C. V.; The Meteorological Office Mk 5 wind system, 130
European Centre for Medium-range Weather Forecasts, 28
Extreme wind speed in the low-level jet-stream system of the western Indian Ocean; J. Findlater, 201

Findlater, J.; An extreme wind speed in the low-level jet-stream system of the western Indian Ocean, 201
Foot, J. S., Simmons, E. L. and Whittaker, A. E.; Measurements of the swing of a balloon payload, 110
Forecasting for the trawler fleet off Iceland, 60
Forecasts for the British Gas Corporation, 60

Gilchrist, A.; Partial differential equations of mathematical physics (Tyn Myint-U), *review*, 269
Goh, K. C. and Lockwood, J. G.; An assessment of topographical controls in the distribution of rainfall in the central Pennines, 275
Griffiths, C. I.; Tornado in south-east Essex on 7 August 1973, 49, *correction*, 180

Ground clutter observed in the Dee Weather Radar Project; T. W. Harrold, 140
Groves (L. G.); Memorial Prizes and Awards, 55, *photographs between* 44, 45

Hallissey, Mary and McIntosh, D. H.; Noctilucent clouds over western Europe during 1973, 157
Hardy, R. N.; A note on the optimum averaging time of wind reports for aviation, 99
Harley, D. G.; IMO/WMO centenary celebrations, 1
Harrold, T. W.; Ground clutter observed in the Dee Weather Radar Project, 140
Harrold, T. W.; Radar observation of the atmosphere (Louis J. Battan), *review*, 57
Harrold, T. W.; The use of weather-radar data in communication engineering, 125
Hawson, C. L., Lowndes, C. A. S. and Beynon, A.; An assessment of the usefulness of some snow predictors, 341
Heighes, J. M.; The Thorpe Bay–Foulness tornado, *letter*, 180
Hill, F. F. and Lewis, R. P. W.; The distribution and frequency of high cumulonimbus tops near Singapore as measured by 10-centimetre radar (Part I), 29, (Part II), 61
Hinz, R. K. and Carroll, G. E.; Note on errors that may be induced by using visibility observations taken at greater than hourly intervals, 105, *correction* 304
Hopkins, J. S.; Britain's weather (its workings, lore and forecasting) (D. Bowen), *review*, 25
Hunt, G. E.; Radiant heat transfer (E. M. Feigel'son), *review*, 238

IMO/WMO centenary celebrations; D. G. Harley, 1
Index of pack-ice severity off Newfoundland and its secular variation; M. K. Miles, 121
Indicators of monthly mean temperature and rainfall for England and Wales based on antecedent monthly pressure anomalies over the northern hemisphere; R. Murray, 70
Institute of Physics awards to the Director-General, 147
Investigation into consecutive wet working days at Southampton; L. P. Stevens, 369

Jenkins, P.; *obituary*, 272

Keenan, I.; *obituary*, 340
Kemp, B. and Starr, J. R.; Mesoscale structure of jet streams and associated clear-air turbulence, 313
Kirk, T. H.; Advances in satellite meteorology (A. I. Burtsev, P. N. Belov and Sh. A. Musaelyan, editors), *review*, 118
Kirk, T. H.; The use of numerical forecasts, 14
Kirk, T. H.; The use of satellite pictures in weather analysis and forecasting, WMO *Technical Note* No. 124 (R. K. Anderson and N. F. Veltischev, editors), *review*, 268
Knighting, E.; The world in figures (V. Showers), *review*, 90

Lankester, J. D. and Murray, R.; Central England temperature quintiles and associated pressure anomalies on a monthly time-scale, 3
Large changes in wind patterns at sea; W. V. Burt, T. Cummings and C. A. Paulson, 21
Lewis, R. P. W. and Hill, F. F.; The distribution and frequency of high cumulonimbus tops near Singapore as measured by 10-centimetre radar (Part I), 29, (Part II), 61
Lockwood, J. G. and Goh, K. C.; An assessment of topographical controls in the distribution of rainfall in the central Pennines, 275
Lowndes, C. A. S., Beynon, A. and Hawson, C. L.; An assessment of the usefulness of some snow predictors, 341
Lumb, F. E.; The magnitude of horizontal divergence and vertical motion associated with upper tropospheric disturbances of the equatorial atmosphere, 146
Lumb, F. E.; Wet-bulb freezing level as a snow predictor, *letter*, 59

Magnitude of horizontal divergence and vertical motion associated with upper tropospheric disturbances of the equatorial atmosphere; F. E. Lumb, 146
Marine climatological summaries for the Atlantic Ocean east of 50°W and north of 20°N, 1963 and 1966; *official publications*, 92
Mason, B. J.; The contribution of satellites to the exploration of the global atmosphere and to the improvement of weather forecasting, 181, *photographs between* 194, 195
Maximum permissible load currents in an overhead transmission line, 60
McIntosh, D. H. and Hallissey, Mary; Noctilucent clouds over western Europe during 1973, 157
McStuart, J.; *obituary*, 340
Measurement of rainfall by radar, 148
Measurements of the swing of a balloon payload; J. S. Foot, E. L. Simmons and A. E. Whittaker, 110
Memorable rainfall event over southern England; Pauline M. Salter and C. J. Richards (Part I), 255, (Part II), 288
Merceret, F. J.; A note on the vertical distribution of raindrop-size spectra in tropical storm Felice, 358
Mesoscale structure of jet streams and associated clear-air turbulence; J. R. Starr and B. Kemp, 313
Meteorological/entomological study; R. J. Adams, 53, *photograph facing* 44
Meteorological Office Mk 5 wind system; C. V. Else, 130
Meteorological Office Weather Observing System (MOWOS) Mk 2; G. J. Day, K. J. T. Sands and B. Tonkinson, 329
Meteorological Office weather observing systems, 147
Meteorological Offshore Buoy Observing Equipment Experiment, 1972; K. J. T. Sands, 150, *photographs between* 164, 165

Meteorological transmission system operating between Beaufort Park and Meteorological Office Headquarters; K. J. T. Sands and D. G. Wilkinson, 74, *photographs between* 76, 77
Miles, M. K.; An index of pack-ice severity off Newfoundland and its secular variation, 121
Miles, M. K.; Synoptic climatology: Methods and applications (R. G. Barry and A. H. Perry); *review*, 178
Miles, M. K.; The variation of annual mean surface pressure over the northern hemisphere during the double sunspot cycle, 93
Miller, J. A.; *obituary*, 60
Murray, R.; Indicators of monthly mean temperature and rainfall for England and Wales based on antecedent monthly pressure anomalies over the northern hemisphere, 70
Murray, R. and Lankester, J. D.; Central England temperature quintiles and associated pressure anomalies on a monthly time-scale, 3

Noctilucent clouds over western Europe during 1973; D. H. McIntosh and Mary Hallissey, 157
Northern hemisphere monthly and annual mean-sea-level pressure distribution for 1951–66, and changes of pressure and temperature compared with those of 1900–39; *official publication*, 91
Note on an index of trapping efficiency of smoke particles in the layer surface to 1000 millibars over Athens at night; J. G. Dikaiakos, 300
Note on errors that may be induced by using visibility observations taken at greater than hourly intervals; R. K. Hinz and G. E. Carroll, 105, *correction*, 304, *letter* from H. C. Shellard, 304
Note on the optimum averaging time of wind reports for aviation; R. N. Hardy, 99
Note on the vertical distribution of raindrop-size spectra in tropical storm Felice; F. J. Merceret, 358
Numerical models for longer-range forecasting and climate simulation, 148

Offshore telemetering buoys, 60
Oliver, H. R.; Wind-speed modification by a very rough surface, 141

Painter, H. E.; Survey of instruments for Micrometeorology (International Biological Programme Handbook No. 22) (J. L. Monteith, compiler), *review*, 27
Parsons, F. J., M.B.E., completes 60 years of observing, 303
Pasquill, F.; Air pollution and atmospheric diffusion (M. E. Berlyand, editor), *review*, 89
Paulson, C. A., Burt, W. V. and Cummings, T.; Large changes in wind patterns at sea, 21
PDP 11/40 mini-computer, 340
Pedgley, D. E.; Winter and spring weather at Riyadh, Saudi Arabia, 225

PUBLICATIONS RECEIVED
Meteorologika 23: *Weather-types and sunshine-duration in the west coast of the Aegean Sea* (A. A. Flocas and P. J. Pennas), 179
Meteorologika 24: *Ground surface temperature.* Part II. Grass-covered ground (G. C. Livadas and Y. A. Goutsidou), 179
Meteorologika 26: *Atmospheric-pressure in Thessaloniki—Greece* (G. C. Livadas and T. J. Makroyannis), 179
Meteorologika 27: *Cloudiness in the major area of Thessaloniki* (V. A. Angouridakis), 179
Observations Météorologiques de Thessaloniki 1970, 179
Observations Météorologiques de Thessaloniki 1971, 180
Observations Météorologiques de Thessaloniki 1972, 180
Sea and air—the marine environment, second edition (J. Williams, J. J. Higginson and J. D. Rohrbough), 208

Radiosonde ascents from merchant ships, 148
Rapid pressure rise followed by an oscillation of pressure during the passage of a trough at Liverpool Airport on 5 December 1972; J. A. Young, 171
Remote Sensing Society conference, 339
Report and commentary on a symposium on the assessment and verification of statistical and other software; J. M. Craddock, 305

RETIREMENTS
Jones, R. F., 273
Knighting, E., 149
Pasquill, Dr F., 273
Sugden, L., 338

REVIEWS
Advances in satellite meteorology (A. I. Burtsev, P. N. Belov and Sh. A. Musaelyan, editors); *review* by T. H. Kirk, 118
Air pollution and atmospheric diffusion (M. E. Berlyand, editor); *review* by F. Pasquill, 89
Airflow over mountains—research 1958–72, WMO *Technical Note* No. 127 (J. M. Nicholls); *review* by R. S. Scorer, 239
Britain's weather (its workings, lore and forecasting) (D. Bowen); *review* by J. S. Hopkins, 25
Climatologie—Méthodes et Pratiques, 2e édition (R. Arléry, H. Grisollet and B. Guilmet); *review* by J. M. Craddock, 206
Comparison between pan and lake evaporation, WMO *Technical Note* No. 126 (C. E. Hounam); *review* by B. G. Wales-Smith, 177
Effect of thermometer screen design on the observed temperature (W. R. Sparks); *review* by S. G. Crawford, 26
Modifying the weather (W. R. D. Sewell *et alii*); *review* by J. S. Sawyer, 119

Partial differential equations of mathematical physics (Tyn Myint-U); *review* by A. Gilchrist, 269
Physics of air–sea interaction (S. A. Kitaigorodskii); *review* by N. Thompson, 270
Principles of environmental physics (J. L. Monteith); *review* by L. P. Smith, 24
Radar observation of the atmosphere (Louis J. Battan); *review* by T. W. Harrold, 57
Radiant heat transfer (E. M. Feigel'son); *review* by G. E. Hunt, 238
Studies in ice physics and ice engineering (G. N. Yakovlev, editor); *review* by G. A. Tunnell, 58
Survey of instruments for micrometeorology (International Biological Programme Handbook No. 22) (J. L. Monteith, compiler); *review* by H. E. Painter, 27
Synoptic climatology: Methods and applications (R. G. Barry and A. H. Perry); *review* by M. K. Miles, 178
Theory and application of numerical analyses (G. M. Phillips and P. J. Taylor); *review* by R. Dixon, 236
Understanding our atmospheric environment (M. Neiburger, J. G. Edinger and W. D. Bonner); *review* by G. R. R. Benwell, 23
Use of satellite pictures in weather analysis and forecasting, WMO *Technical Note* No. 124 (R. K. Anderson and N. F. Veltischev, editors); *review* by T. H. Kirk, 268
World in figures (V. Showers); *review* by E. Knighting, 90

Richards, C. J. and Salter, Pauline M.; A memorable rainfall event over southern England (Part I), 255, (Part II), 288

Salter, Pauline M. and Richards, C. J.; A memorable rainfall event over southern England (Part I), 255, (Part II), 288
Samuel, G. A.; *obituary*, 372
Sands, K. J. T.; The Meteorological Offshore Buoy Observing Equipment Experiment, 1972, 150, *photographs between* 164, 165
Sands, K. J. T., Day, G. J. and Tonkinson, B.; The Meteorological Office Weather Observing System (MOWOS) Mk 2, 329
Sands, K. J. T. and Wilkinson, D. G.; The meteorological transmission system operating between Beaufort Park and Meteorological Office Headquarters, 74, *photographs between* 76, 77
Sawyer, J. S.; Modifying the weather (W. R. D. Sewell *et alii*), *review*, 119
Scheme for deriving day-time boundary-layer wind profiles; F. B. Smith and D. J. Carson, 241
Scorer, R. S.; Airflow over mountains—research 1958–72, WMO *Technical Note* No. 127 (J. M. Nicholls), *review*, 239
Shellard, H. C.; Appointment to Imperial Service Order, 272
Shellard, H. C.; Note on errors that may be induced by using visibility observations taken at greater than hourly intervals, *letter*, 304
Short note on sea-breeze crossing East Anglia; M. F. Smith, 115
Simmons, E. L., Foot, J. S. and Whittaker, A. E.; Measurements of the swing of a balloon payload, 110
Smith, F. B. and Carson, D. J.; A scheme for deriving day-time boundary-layer wind profiles, 241
Smith, L. P.; Principles of environmental physics (J. L. Monteith), *review*, 24
Smith, M. F.; A short note on a sea-breeze crossing East Anglia, 115
Some examples of the rainfall forecasts produced by the fine-mesh version of the 10-level model; P. G. Wickham, 209
Starr, J. R. and Kemp, B.; Mesoscale structure of jet streams and associated clear-air turbulence, 313
Stevens, L. P.; An investigation into consecutive wet working days at Southampton, 369

Temperature differences between two ground-level sites and a roof site in Southampton; J. J. Armstrong, 360
Thompson, N.; The physics of air–sea interaction (S. A. Kitaigorodskii), *review*, 270
Thorpe Bay–Foulness tornado; *letter* from J. M. Heighes, 180
Tornado in south-east Essex on 7 August 1973; C. I. Griffiths, 49, *correction*, 180
Tonkinson, B., Day, G. J. and Sands, K. J. T.; The Meteorological Office Weather Observing System (MOWOS) Mk 2, 329
Tornadoes of 26 June 1973; K. W. Whyte, 160, *photographs between* 164, 165
Trowell, G. F.; *obituary*, 304
Tunnell, G. A.; Studies in ice physics and ice engineering (G. N. Yakovlev, editor) *review*, 58

Use of numerical forecasts; T. H. Kirk, 14
Use of weather-radar data in communication engineering; T. W. Harrold, 125

Variation of annual mean surface pressure over the northern hemisphere during the double sunspot cycle; M. K. Miles, 93

Wales-Smith, B. G.; Comparison between pan and lake evaporation, WMO *Technical Note* No. 126 (C. E. Hounam); *review*, 177
Watson-Watt, Sir Robert; *obituary*, 92
Weston, K. J. and Cattle, H.; The determination of large-scale vertical motion by a modified isentropic technique, 82
Wet-bulb freezing level as a snow predictor; *letter* from F. E. Lumb, 59
Wet-bulb freezing level as a snow predictor; *letter* from C. J. Boyden, 207
Whittaker, A. E., Foot, J. S. and Simmons, E. L.; Measurements of the swing of a balloon payload, 110

Whyte, K. W.; The tornadoes of 26 June 1973, 160, *photographs between* 164, 165
Wickham, P. G.; Some examples of the rainfall forecasts produced by the fine-mesh version of the 10-level model, 209
Wilkinson, D. G. and Sands, K. J. T.; The meteorological transmission system operating between Beaufort Park and Meteorological Office Headquarters, 74, *photographs between* 76, 77
Wind-speed modification by a very rough surface; H. R. Oliver, 141
Winter and spring weather at Riyadh, Saudi Arabia; D. E. Pedgley, 225

Young, J. A.; Rapid pressure rise followed by an oscillation of pressure during the passage of a trough at Liverpool Airport on 5 December 1972, 171

The responsibility for facts and opinions expressed in the signed articles and letters published in this magazine rests with their respective authors.

PUBLISHED FOR THE METEOROLOGICAL OFFICE BY HER MAJESTY'S STATIONERY OFFICE

Crown copyright 1974